CLAIMS:

What is claimed is:

1. An ice conditioning apparatus comprising:

an ice conditioning machine mounted on wheels for movement along an ice surface in an operating travel direction;

a blade bar mounted on the ice conditioning machine;

an ice blade defining a cutting edge on a lower front edge thereof;

a plurality of magnets attached to the blade bar and operative to exert a magnetic attraction on the ice blade and to hold the ice blade against the blade bar in an operating position such that the ice blade is oriented substantially parallel to the ice surface;

wherein the blade bar and ice blade define blade guides operative to prevent sliding movement of the ice blade out of the operating position when the cutting edge engages the ice surface in the operating travel direction;

a blade height control operative to move the blade bar with respect to the wheels to move the ice blade up and down.

2. The apparatus of Claim 1 wherein the blade guides are further operative to prevent movement of the ice blade away from the blade bar when the ice blade is in the operating position.

3. The apparatus of any one of Claims 1 and 2 wherein the blade guides comprise a plurality of pegs extending from one of the blade bar and ice blade into corresponding recesses in the other of the blade bar and ice blade.

4. The apparatus of Claim 3 wherein the pegs and recesses are tapered such that as the pegs move into the recesses, a lateral force can be exerted by a tapered side of the pegs against a tapered side of the recesses to move the ice blade laterally and when the pegs are seated in the recesses the ice blade is in the operating position.

5. The apparatus of Claim 3 wherein:

the pegs comprise a head on distal ends thereof, the heads having a width greater than the pegs; and

the recesses are elongated and each recess has a width greater than a width of the head and comprises an open portion at one end thereof larger than the head and a covered portion comprising a slot extending laterally from the open portion, the covered portion configured to allow the peg to pass along the slot, and allow the head to pass along the recess under the slot, and prevent the head from passing through the slot.

6. The apparatus of Claim 5 wherein the slot is tapered and has a proximate width at a first end adjacent to the open portion that is greater than a width of the peg, and a distal width at an opposite second end that is substantially equal to the width of the peg.

7. The apparatus of Claim 6 wherein the pegs are blade pegs extending downward from the blade bar and the recesses are blade recesses defined by an upper portion of the ice blade.

8. The apparatus of Claim 7 wherein the blade recesses are elongated in the operating travel direction and wherein the slots extend forward from the open portions of the blade recesses.

9. The apparatus of Claim 8 further comprising a cradle apparatus adapted for attachment to a floor, a top side of the cradle apparatus operative to engage the

ice blade and maintain the ice blade in an installation position such that the ice conditioning machine can be driven over the cradle apparatus and the blade bar can be lowered to position the heads of the pegs in the open portions of the recesses, and such that the ice conditioning machine can then be moved forward to engage the pegs in the slots and disengage the ice blade from the cradle.

10. The apparatus of Claim 9 wherein the ice blade defines cradle recesses on a lower portion thereof and wherein the cradle apparatus comprises cradle pegs extending upward into corresponding cradle recesses on the ice blade.

11. The apparatus of Claim 9 wherein:

the cradle pegs comprise a head on distal ends thereof, the heads having a width greater than the cradle pegs; and

the cradle recesses are elongated in the operating travel direction and each cradle recess has a width greater than a width of the head of the cradle pegs and comprises an open portion at one end thereof larger than the head and a covered portion comprising a slot extending forward from the open portion, the covered portion configured to allow the cradle peg to pass along the slot, and allow the head to pass along the cradle recess under the slot, and prevent the head from passing through the slot.

12. The apparatus of Claim 11 wherein the slot is tapered and has a proximate width at a rear end adjacent to the open portion that is greater than a width of the cradle peg, and a distal width at an opposite forward end that is substantially equal to the width of the cradle peg.

13. The apparatus of any one of Claims 9 - 12 further comprising wheel guides aligned with the cradle apparatus to guide the ice conditioning machine into proper alignment with the ice blade such that the blade bar can be lowered to position the heads of the pegs in the open portions of the recesses.

14. The apparatus of any one of Claims 9 - 13 further comprising a second set of cradle pegs oriented to engage cradle recesses in a second ice blade such that the second ice blade is in a second installation position oriented substantially parallel to and in alignment with a first ice blade engaging a first set of cradle pegs in a first installation position at a distance removed from the first ice blade.

15. The apparatus of Claim 14 wherein the first installation position is forward of the second installation position.

16. The apparatus of any one of Claims 1 - 15 wherein the magnets are electromagnets, and further comprising an electrical power source operative to

supply electrical current to the electromagnets, and a magnet control operative to control the electrical current passing from the electrical power source through the electromagnets;

17. The apparatus of Claim 16 wherein the magnet control is operative to close off the electrical power to the electromagnets such that the magnetic attraction between the blade bar and the ice blade is substantially released.

18. A method of attaching an ice blade to an ice conditioning machine mounted on wheels for movement along an ice surface in an operating travel direction, the method comprising:

attaching a blade bar to the ice conditioning machine;

attaching a plurality of magnets to the blade bar;

bringing the ice blade and blade bar together such that the ice is magnetically held against the blade bar in an operating position oriented substantially parallel to the ice surface;

preventing sliding movement of the ice blade out of the operating position by providing blade guides.

19. The method of Claim 18 further comprising providing blade guides that are operative to prevent movement of the ice blade away from the blade bar when the ice blade is in the operating position

20. The method of Claim 18 wherein the ice blade and blade bar are brought together by holding the ice blade in an installation position on a cradle and maneuvering the ice conditioning machine over the cradle, and then lowering the blade bar down onto the ice blade.

21. The method of Claim 20 wherein the blade guides comprise a plurality of blade pegs extending down from the blade bar into corresponding blade recesses defined by an upper portion of the ice blade.

22. The method of Claim 21 wherein:

the blade pegs comprise a head on distal ends thereof, the heads having a width greater than the blade pegs; and

the blade recesses are elongated and each blade recess has a width greater than the head and comprises an open portion at one end thereof larger than the head and a covered portion comprising a slot extending laterally from the open portion, the

covered portion configured to allow the blade peg to pass along the slot, and allow the head to pass along the recess under the slot, and prevent the head from passing through the slot.

23. The method of Claim 22 wherein:

the blade recesses are elongated in the operating travel direction and the slots extend forward from the open portions of the blade recesses;

the slot is tapered and has a proximate width at a first end adjacent to the open portion that is greater than a width of the blade peg, and a distal width at an opposite second end that is substantially equal to the width of the blade peg;

the blade bar is lowered to position the heads of the blade pegs in the open portions of the blade recesses, and the ice conditioning machine is then moved forward to engage the blade pegs in the slots and disengage the ice blade from the cradle.

24. The method of Claim 23 wherein the ice blade defines cradle recesses on a lower portion thereof and wherein the cradle comprises cradle pegs extending upward into corresponding cradle recesses on the ice blade.

25. The method of Claim 24 wherein:

the cradle pegs comprise a head on distal ends thereof, the heads having a width greater than the cradle pegs; and

the cradle recesses are elongated in the operating travel direction and each cradle recess has a width greater than the head and comprises an open portion at one end thereof larger than the head and a covered portion comprising a slot extending forward from the open portion, the covered portion configured to allow the cradle peg to pass along the slot, and allow the head to pass along the cradle recess under the slot, and prevent the head from passing through the slot.

26. The method of Claim 25 wherein the slot is tapered and has a proximate width at a rear end adjacent to the open portion that is greater than a width of the cradle peg, and a distal width at an opposite forward end that is substantially equal to the width of the cradle peg.

27. The method of any one of Claims 18 - 26 wherein the magnets are electromagnets.